Geometry Math Reflections

**Area Stays the Same**

*Planning and instruction*

* I think the timing for this lesson was a little tricky—some students were able to complete multiple shapes successfully, while others struggled to complete their first
* I also noticed that the language I used to describe the task was unclear—should they make one cut, should they only cut off one piece, what exactly was the *procedure* for creating the new shape?
* I think some of the above problems could be solved with a clearer, more heavily narrated example on the rug.
* I was also didn’t have a great plan for materials management (scissors, yarn, etc) and that caused some trouble.
* If I did this lesson again, I think I would choose a different kind of yarn/string with less give so that the perimeter measures were more precise

*Student learning*

* I feel like students were motivated and on task during this workshop time
* I could have scaffolded extensions with more clarity (i.e. instead of just making a second shape, make one that you *think*  will have a greater/lesser perimeter than your first—how and why?)
* Students began to have some nice noticings during the share re: patterns

*Implications for future lessons*

* I want to hammer home the idea of generalizing—using a few examples and extending what you see into a broad observation or even a rule
* I also want to be sure students are clear on the language we are working with. It’s easy to accidentally slip between “perimeter” and “area”—I do it myself on occasion, but I want to minimize that as much as possible.

**Perimeter Stays the Same**

*Planning and instruction*

* I think adjusting the plan to lean into the previous day’s work early on paid off—students solidified their thinking re: area stays the same and were in a good mindset to see and name patterns and generalizations for perimeter stays the same
* I had students try it out on the rug in partnerships, but didn’t have a clear directive for what to do with those pieces of paper—who would keep them?
* I felt comfortable with this plan. It felt internalized and, therefore, easy to execute.

*Student learning*

* My biggest regret with this lesson was seeing that one students was confused not once but twice about what it meant to keep the perimeter the same. He was thinking about area and coming up with some great shapes, but was misinterpreting the task. I know that was frustrating for him. I felt frustrated with myself for not catching his confusion earlier. In the future, this gives me a sense of who I *need*  to check in with before conferring with other kids.
* I was excited about the descriptors kids came up with for the shapes with greates/least area. I think they were starting to see the patterns.
* One sticky spot that I hadn’t anticipated was that some tables didn’t have a huge variety from greatest to least, so up on the char the distinction wasn’t as clear as I had anticipated (ie some of the “greatest” weren’t that skinny, some of the “least” weren’t that fat)

*Implications for future lessons*

* I think the chart that we created at the close of this lesson is a good record of a few things:
  + The distinction between perimeter and area
  + How to categorize and sort
  + How to see patterns or make generalize-able observations
* So, I hope to hold on to this thinking and keep returning to this chart and this work (especially after the long Spring Break!)